



EXPRESS MAIL LABEL NO.:EV 518894815

PATENT

Attorney Docket No. 31304-702.831

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application	)	<u>PATENT APPLICATION</u>
	)	
Inventor(s): Christof Niehrs et al.	)	
	)	Art Unit: 1645
Application No.: 10/509,464	)	
	)	Examiner: Unassigned
Filed: September 27, 2004	)	
	)	
Title: COMPOSITIONS FOR DIAGNOSIS	)	
AND THERAPY OF DISEASES	)	
ASSOCIATED WITH ABERRANT	)	
EXPRESSION OF KREMEN AND/OR WNT	)	

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97**

Sir:

Applicants hereby submit an Information Disclosure Statement along with attached form(s) PTO/SB/08. A copy of each listed publication is being submitted herewith, along with a concise explanation of information in a foreign language, if any, pursuant to 37 C.F.R. §1.97-1.98.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. Applicants further request that the Examiner initial and return the attached form(s) PTO/SB/08 in accordance with MPEP §609.

Applicants reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, prior art or material to patentability as defined in §1.56.

- ☒ This statement qualifies under 37 C.F.R. §1.97, subsection (b) because:
- ☐ (1) It is being filed within 3 months of the application filing date and is other than a continued prosecution application under § 1.53(d)  
-- OR --
  - ☐ (2) It is being filed within 3 months of entry of a national stage  
-- OR --
  - ☒ (3) It is being filed before the mail date of the first Office Action on the merits  
-- OR --
  - ☐ (4) It is being filed before the mailing of a first Office Action after the filing of a request for continued examination under § 1.114.
- ☐ 37 C.F.R. §1.97(c). If this statement is being filed after the latest of: (1) three months beyond the filing date of a national application; (2) three months beyond the date of entry of the national stage as set forth in §1.491 in an international application; or (3) the mailing date of a first Office action on the merits, but before the mailing date of the earlier of a final office action under §1.113 or a notice of allowance under §1.311, then:
- ☐ a certification as specified in §1.97(e) is provided below; **or**
  - ☐ a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.
- ☐ 37 C.F.R. §1.97(d). If this statement is being filed after the mailing date of the earlier of a final office action under §1.113 or a notice of allowance under §1.311, but before payment of the issue fee, then:
- A. a certification as specified in §1.97(e) is completed below; and
  - B. a petition under 37 C.F.R. §1.97(d) requesting consideration of this statement is submitted herewith; **and**
  - C. a fee of \$130.00 as set forth in §1.17(i)(1) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.
- ☒ Copies of each of the references listed on the attached Form PTO/SB/08 are enclosed herewith.
- ☐ Copies of references listed on the attached Form PTO/SB/08 are enclosed herewith EXCEPT THAT:
- ☐ In view of the voluminous nature of references, and the likelihood that these references are available to the Examiner in the file history of the parent application (Serial No.     ), copies are not enclosed herewith.
  - ☐ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

- ☐ Copies of only foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98 (a)(2). (The U.S. patents and each U.S. patent application publication listed on the attached Form PTO-1449 are not enclosed because this U.S. patent application was filed after June 30, 2003 or this international application has entered the national stage under 35 USC §371 after June 30, 2003 (see USPTO waiver of requirement under 37 CFR 1.98 (a)(2)(i)).
- ☒ There are no listed references which are not in the English language.
- ☐ The relevance of those listed references which are not in the English language is as follows:
- ☐ Attached are copies of search report(s) from corresponding patent application(s), submitted in accordance with MPEP 609 D in support of the attached certification under 37 CFR 1.97(e)(1).
- ☐ Attached are the following non-published pending patent applications which may be deemed relevant.
- ☒ *Fee Authorization.* The Commissioner is hereby authorized to charge the above-referenced fees of \$0.00 and charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 23-2415 (Docket No.31304-702.831).

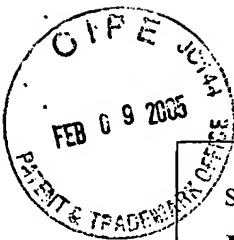
Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Dated: February 9, 2005

By: Albert P. Halluin  
Albert P. Halluin, Reg. No. 25,227

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<b>Substitute for form 1449/PTO</b> <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/509,464
				Filing Date	September 27, 2004
				First Named Inventor	Christof Niehrs
				Art Unit	1645
Examiner Name	Unassigned				
Sheet	1	of	4	Attorney Docket Number	31301-702.831

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	1	US- 2001/0036643 A1	11-01-2001	James L. Holloway	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	2	EP 0 911 399 A2	04-28-1999	Smithkline Beecham Corporation		
	3	WO 00/77239 A2	12-21-2000	Millennium Pharmaceuticals, Inc.		
	4	WO 01/34621 A1	05-17-2001	Human Genome Sciences, Inc.		
	5	WO 02/02603 A2	01-10-2002	Incyte Genomics, Inc.		
	6	WO 02/066509 A2	08-29-2002	Genentech, Inc.		
	7	WO 02/092015 A2	11-21-2002	Genome Therapeutics Corporation		

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	8	BOYDEN, LYNN M PH.D. ET AL., High Bone Density Due to a Mutation in LDL-Receptor-related Protein 5, The New England Journal of Medicine, 2002, 346: 1513-1521	
	9	BROWN SHERYL D ET AL, Isolation and Characterization of LRP6, a Novel Member of the Low Density Lipoprotein Receptor Gene Family, Biochemical and Biophysical Research Communications, 1998, 248: 879-888	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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	10	DATABASE EMBL [Online] 26 June 2001 (2001-06-26), XP002249432 retrieved from EBI Database accession no. AAB95341	
	11	DATABASE EMBL [Online] 6 November 2001 (2001-11-06), XP002249370 retrieved from EBI Database accession no. AAM93480	
	12	FISCHER LESLIE ET AL, Wnt-3A Enhances Bone Morphogenetic Protein-2-mediated Chondrogenesis of Murine C3H10T1/2 Mesenchymal Cells, Journal of Biological Chemistry, 2002, 277: 30870-30878	
	13	FUJINO TAKAHIRO ET AL, Low-density Lipoprotein Receptor-related Protein 5 (LRP5) is Essential for Normal Cholesterol Metabolism and Glucose-Induced Insulin Secretion, Proc. Natl. Acad. Sci. U S A, 2003, 100: 229-234	
	14	GONG YAOQIN ET AL, LDL Receptor-Related Protein 5 (LRP5) Affects Bone Accrual and Eye Development, Cell, 2001, 107: 513-523	
	15	KATO MASAKI ET AL, Cbfa1-Independent Decrease in Osteoblast Proliferation, Osteopenia, and Persistent Embryonic Eye Vascularization in Mice Deficient in Lrp5, a Wnt coreceptor, The Journal of Cell Biology, 2002, 157: 303-314	
	16	LITTLE RANDALL D. ET AL, A Mutation in the LDL Receptor-related Protein 5 Gene Results in the Autosomal Dominant High-Bone-Mass Trait, Am. J. Hum. Genet, 2002, 70: 11-19	

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This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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	17	MAO BINGYU ET AL, LDL-receptor-related protein 6 is a receptor for Dickkopf Proteins, Nature, 2001, 411: 321-325	
	18	MILLER JEFFREY R. ET AL, Signal Transduction Through $\beta$ -catenin and Specification of Cell Fate During Embryogenesis, Genes & Development, 1996, 10: 2527-2539	
	19	NAKAMURA TAKAHIRO ET AL, Molecular Cloning and Characterization of Kremen, a Novel Kringle-containing Transmembrane Protein, Biochimica et Biophysica Acta, 2001, 1518: 63-72	
	20	NUSSE ROEL ET AL, Wnt Genes, Cell, 1992, 69: 1073-1087	
	21	PEIFER MARK, $\beta$ -Catenin as Oncogene: The Smoking Gun, Science, 1997, 275: 1752-1753	
	22	POLAKIS PAUL, Wnt Signaling and Cancer, Genes & Development, 2000, 14: 1837-1851	
	23	SAADI-KHEDDOUCI SIHEM ET AL, Early Development of Polycystic Kidney Disease in Transgenic Mice Expressing an Activated Mutant of the $\beta$ -catenin Gene, Oncogene, 2001, 20: 5972-5981	

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	24	SURENDRAN KAMESWARAN ET AL, A Role for Wnt-4 in Renal Fibrosis, Am. J. Physiol. Renal Physiol., 2002, 282: 431-441	
	25	VAN ES JOHAN H ET AL, You Wnt some, you lose some: Oncogenese in the Wnt signaling pathway, Current Opinion in Genetics & Development, 2003, 13: 28-33	
	26	YANG YINGZI ET AL, Wnt5a and Wnt5b Exhibit Distinct Activities in Coordinating Chondrocyte Proliferation and Differentiation, Development, 2003, 130: 1003-1015	
	27	AARON M. ZORN, Wnt Signaling: Antagonistic Dickkopfs, Current Biology, 2001, 11: R592-595	

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